

What is claimed is:

1. An electric timepiece including:
 - a controlling device with at least a volatile memory adapted to be written with time-related data,
 - 5 a non-volatile memory adapted to be written with time-related data, and a motor operatively associated with an analog time display, wherein said time-related data in said volatile memory and in said non-volatile memory are synchronized with each other, and wherein said controlling device is adapted to update said time-related data in said volatile memory and in said non-volatile memory simultaneously every second.
- 10 2. A timepiece according to Claim 1 wherein said controlling device comprises a micro-controller.
3. A timepiece according to Claim 1 further including a radio signal receiver adapted to receive radio signals relating to the current time from an outside source.
- 15 4. A timepiece according to Claim 1 wherein said non-volatile memory is an EEPROM.
5. A timepiece according to Claim 1 wherein said non-volatile memory is a FRAM.
6. A timepiece according to Claim 1 wherein said non-volatile memory is external 20 of said controlling device.
7. A timepiece according to Claim 1 wherein said controlling device includes said non-volatile memory.
8. A timepiece according to Claim 1 wherein said controlling device is adapted to send pulse signals to said motor for driving said analog time display.
- 25 9. A timepiece according to Claim 8 wherein said controlling device includes at least one input/output (I/O) port for measuring the pulse width of the pulse signals sent to said motor.
10. A timepiece according to Claim 9 wherein said controlling device is adapted to stop operation when the result of the measuring of the width of a pulse signal is negative.
- 30 11. A timepiece according to Claim 1 wherein said controlling device monitors the supply voltage level of at least one battery powering said timepiece.

12. A timepiece according to Claim 11 wherein said controlling device is adapted to stop operation when the supply voltage of said at least one battery falls below a predetermined level.
13. A timepiece according to Claim 1 wherein the minimum operating voltage of the controlling device is higher than the voltage required for driving said motor.
14. A timepiece according to Claim 1 further including a voltage regulator for supplying power to the controlling device.
15. A timepiece according to Claim 14 wherein the voltage applied to the controlling device via the voltage regulator is just above the operating voltage of the controlling device.
16. A method of operating an electric timepiece including the steps of:
 - providing a controlling device with at least a volatile memory;
 - providing a non-volatile memory;
 - providing a motor operatively associated with an analog time display;
 - writing time-related data into said volatile memory;
 - writing time-related data into said non-volatile memory;
 - synchronizing said time-related data in said volatile memory and in said non-volatile memory; and
 - said controlling device updating said time-related data in said volatile memory and in said non-volatile memory simultaneously every second.
17. A method according to Claim 16 wherein said controlling device comprises a micro-controller.
18. A method according to Claim 16 further including a radio signal receiver adapted to receive radio signals relating to the current time from an outside source.
19. A method according to Claim 16 wherein said non-volatile memory is an EEPROM.
20. A method according to Claim 16 wherein said non-volatile memory is a FRAM.
21. A method according to Claim 16 wherein said non-volatile memory is external of said controlling device.
22. A method according to Claim 16 wherein said controlling device includes said non-volatile memory.

23. A method according to Claim 16 wherein said controlling device sends pulse signals to said motor for driving said analog time display.
24. A method according to Claim 23 wherein said controlling device includes at least one input/output (I/O) port which measures the pulse width of the pulse signals sent to said motor.
- 5 25. A method according to Claim 24 wherein said controlling device stops operation when the result of the measuring of the width of a pulse signal is negative.
26. A method according to Claim 16 wherein said controlling device monitors the supply voltage level of at least one battery powering said timepiece.
- 10 27. A method according to Claim 26 wherein said controlling device stops operation when the supply voltage of said at least one battery falls below a predetermined level.
28. A method according to Claim 16 wherein the minimum operating voltage of the controlling device is higher than the voltage required for driving said motor.
- 15 29. A method according to Claim 16 further including a voltage regulator for supplying power to the controlling device.
30. A method according to Claim 29 wherein the voltage applied to the controlling device via the voltage regulator is just above the operating voltage of the controlling device.